

PRELIMINARY DETERMINATION
ON PERMIT APPLICATION

Date of Mailing: September 25, 2019

Name of Applicant: Barretts Minerals, Inc – Treasure Mine

Source: Talc Mine

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Permit Application Number 2793-03.

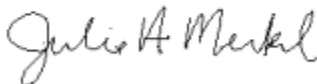
Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Quality Bureau (Bureau) of the Department at the address in the footer of this cover letter. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by October 25, 2019. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the Bureau's office in Helena. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620.

For the Department,



Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626



Rhonda Payne
Air Quality Specialist
Air Quality Bureau
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JM:RP
Enclosures

MONTANA AIR QUALITY PERMIT

Issued To: Barretts Minerals, Inc
Treasure Mine
8625 MT Hwy 91 South
Dillon, MT 59725

MAQP: #2793-03
Application Complete: 8/16/2019
Preliminary Determination Issued: 9/25/2019
Department's Decision Issued:
Permit Final:

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Barretts Minerals, Inc. – Treasure Mine (BMI), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

BMI operates the Treasure Mine, a talc mine located in the NW ¼ of Section 14, Township 7 South, Range 6 West in Madison County, MT. The latitude and longitude of the mine site centroid is 45.228811, -112.312088.

B. Current Permit Action

On August 16, 2019, the Montana Department of Environmental Quality – Air Quality Bureau (Department) received a request from BMI to modify their MAQP to install a portable crusher and generator set and associated conveyors and screens. The crusher will be utilized to crush stockpiled material located at the Treasure Mine. MAQP #2793-03 makes the requested change and updates the permit to reflect current Department language, rule references, and federal emission standards for affected equipment.

Section II: Conditions and Limitations

A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS) – affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - a. For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity
 - b. For crushers that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 15% opacity

2. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over six consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - a. For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity
 - b. For equipment that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 10% opacity
3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).
4. Water and spray bars shall be available on-site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749).
5. Maximum ore production shall be limited to 200,000 tons during any twelve (12) month rolling period (ARM 17.8.752).
6. Maximum waste production shall be limited to 3,500,000 tons during any twelve (12) month rolling period (ARM 17.8.752).
7. BMI shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308 and ARM 17.8.749).
8. BMI shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.7 (ARM 17.8.749).
9. Operation of the diesel engine driving the generator shall not exceed 6200 hours during any rolling 12-month time period and the engine shall be compliant with the Environmental Protection Agency's (EPA) non-road compression-ignition engine Tier 2 or higher emission standards pursuant to 40 CFR Part 89.112 (ARM 17.8.749 and ARM 17.8.1204).
10. BMI shall comply with all applicable standards and limitations, monitoring, reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
11. BMI shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any

applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures as specified in 40 CFR 60.675 must be performed on all 40 CFR 60, Subpart OOO-affected equipment to demonstrate compliance with the emission limitations contained in Section II.A.1 and II.A.2. Additional testing may be required by 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department of Environmental Quality (Department) may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. BMI shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. BMI shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).
3. BMI shall maintain records showing daily hours of operation and daily production rates for the last 12 months. The records compiled in accordance with this permit shall be maintained by BMI as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request. These records may be stored at a location other than the plant site upon approval by the Department (ARM 17.8.749).

4. BMI shall document, by month, the hours of operation of the diesel engine/generator. By the 25th day of each month, BMI shall total the hours of operation for the diesel generator engine for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.9. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
5. BMI shall annually certify that its emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

BMI shall provide the Department with written notification of the actual start-up date of the crushing and screening set postmarked within 15 days after the actual start-up date (ARM 17.8.749).

Section III: General Conditions

- A. Inspection – BMI shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment such as Continuous Emission Monitoring Systems (CEMS) or Continuous Emission Rate Monitoring Systems (CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if BMI fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving BMI of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and

issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by BMI may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit Analysis
Barretts Minerals Inc. – Treasure Mine
MAQP #2793-03

I. Introduction/Process Description

Barretts Minerals Inc. (BMI) owns and operates a talc mine. The facility is located in the NW ¼ of Section 14, Township 7 South, Range 6 West in Madison County, MT, and is known as the Treasure Mine.

A. Permitted Equipment

The permit covers the operations of the facility. Operations include blasting, drilling, crushing, screening, and conveying of material. Emissions are also generated from a diesel generator, bulk loading, stockpiles, diesel vehicle exhaust, and haul and access roads.

B. Source Description

BMI Treasure Mine, a talc mine constructed in 1955, has been in operation since 1960. The talc is drilled and blasted from the mine and hauled to the Barretts Mill Complex, roughly 8 miles south of Dillon, MT for processing.

C. Permit History

On August 11, 1993, MAQP **#2793-00** was issued to BMI for the operation of a portable crushing plant. The permit covered a 1955 Jaw crusher with a grizzly and associated equipment.

On April 30, 1999, BMI was issued MAQP **#2793-01**. The facility was originally issued a permit as a portable crushing plant. The facility was since determined to be a stationary talc mining operation. BMI also requested that the permit be written to allow the facility flexibility to make changes under ARM 17.8.743(1)(q). Also, the rule references were updated.

On April 28, 1999, BMI requested a modification to MAQP #2793-01. MAQP #2793-01 was issued with an ore and waste production limitation that was incorrectly calculated. This modification corrected Section II.A.2 and 3 to reflect the correct ore and waste production limitations. The correct limitations did not affect the emission levels that were used in the analyzing of the mine. On May 19, 1999, **MAQP #2793-02** was issued and replaced MAQP #2793-01.

D. Current Permit Action

On August 16, 2019, the Department of Environmental Quality – Air Quality Bureau (Department) received from BMI a complete application to modify MAQP #2793-02. The modification requests to operate a portable crusher and screening operation. The crusher, screens and generator set was approved as a pilot project under the May 10, 2019 de minimis action. BMI has determined that the equipment will remain onsite and therefore is seeking to modify their air permit to include the equipment. MAQP #2793-03

makes the requested change and updates the permit to reflect current Department language, rule references, and federal emission standards for affected equipment. **MAQP #2793-03** replaces MAQP #2793-02.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

BMI shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀
11. ARM 17.8.230 Fluoride in Forage

BMI must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, BMI shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). BMI is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.
 - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
 - b. 40 CFR 60, Subpart OOO – Standard of Performance for Nonmetallic Mineral Processing Plants. For a crushing plant to be subject to this subpart, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by BMI, the portable crushing equipment to be used under MAQP #2793-03 is subject to this subpart because it has the capacity to process more than 150 tons per hour of nonmetallic minerals.
 - c. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators for stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart. Based on the information submitted by BMI, the CI ICE to be used under MAQP #2793-03 is a non-road CI ICE associated with a portable crushing and screening operation and therefore may not be subject to this regulation for stationary CI ICE. However, a non-road engine would become regulated as a stationary engine if it remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. Therefore, this subpart would become applicable if BMI operated the CI ICE at a single location for more than 12 months or a shorter period of time for an engine located at a seasonal source.
8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:
 - a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to an NESHAP Subpart as listed below:
 - b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary RICE at a major area source of HAP emissions is subject to this rule except if the stationary RICE is being tested

at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. Based on the information submitted by BMI, the RICE to be used under MAQP #2793-03 is a non-road RICE associated with a portable facility and therefore may not be subject to this regulation for stationary RICE. However, a non-road engine would become regulated as a stationary engine if it remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. Therefore, this subpart would become applicable if Sierra operated the RICE at a single location for more than 12 months or a shorter period of time for an engine located at a seasonal source.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. BMI submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. BMI has a PTE greater than 25 tons per year of particulate matter with an aerodynamic diameter of 10 microns or less (PM10), oxides of nitrogen (NOx), and carbon monoxide (CO); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. BMI submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. BMI submitted an affidavit of publication of public notice for the August 21, 2019 issue of the *Dillon Tribune*, a newspaper of general circulation in the Town of Dillon in Beaverhead County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving BMI of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2793-03 for BMI, the following conclusions were made:

- a. The facility's PTE is less than 100 tons/year for any pollutant.
- b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
- c. This source is not located in a serious PM₁₀ nonattainment area.
- d. This facility is currently subject to NSPS (40 CFR 60, Subpart A – General Provisions and Subpart OOO – Non-Metallic Mineral Processing Plants, and potentially Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines).
- e. This facility is potentially subject to a current NESHAP (40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines).
- f. This source is not a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

BMI requested federally-enforceable permit limitations to remain a minor source of emissions with respect to Title V. Based on these limitations, the Department determined that this facility is not subject to the Title V Operating Permit Program. However, if the EPA makes minor sources that are subject to NSPS obtain a Title V Operating Permit, this source will be subject to the Title V Operating Permit Program.

- a. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.
 - i. In applying for an exemption under this section the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.
 - ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.
- 3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by ARM 17.8.1204(3)(a) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

III. BACT Determination

A BACT determination is required for each new or modified source. BMI shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

A. Process and Fugitive Particulate Emissions

No measurement methodology exists to directly measure particulate emissions coming from crushing and screening operations that do not utilize a capture and control system. In accord with ARM 17.8.740(2), a visible emissions standard (opacity) may serve as a surrogate in defining the maximum degree of reduction required by BACT. This source is subject to NSPS 40 CFR Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), incorporated by reference in ARM 17.8 Subchapter 3, which requires that crushing and screening operations meet certain opacity standards. Therefore, these standards serve as the floor for determining the maximum degree of reduction achievable, while meeting BACT. Particulate matter emissions are generated from haul roads, access roads, parking lots, material storage and handling. BMI is subject to the general opacity requirements of ARM 17.8 Subchapter 3. These requirements limit opacity to no more than 20% averaged over six consecutive minutes.

Two types of emission controls are readily available and used for dust suppression of fugitive emissions at the site. These two control methods are water and/or chemical dust suppressant. Chemical dust suppressant could be used on the area surrounding the crushing/screening operation, and for emissions from the crushing/screening operation itself. However, because water is more readily available, is more cost effective, is often equally effective as chemical dust suppressant, and is more environmentally friendly, water has been identified as the most appropriate method of pollution control of particulate emissions. In addition, water suppression has been required of recently permitted similar sources. However, depending on individual site circumstances, BMI may use chemical dust suppressants to assist in controlling particulate emissions. The Department determined that the use of water and/or chemical dust suppressant, as necessary, constitutes BACT.

B. Diesel Generator Engine

Due to the limited amount of emissions produced by the diesel-fired engines used in association with MAQP #2793-03 and the lack of cost-effective add-on controls, such add on controls would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance with no add-on controls would constitute BACT for the diesel fired engine. In addition, any new diesel-fired engine would likely be required to comply with federal engine emission limitations including, for example, EPA Tiered emission standards for nonroad engines (40 CFR Part 89 or 1039), NSPS emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or NESHAP for Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ). The Department has determined that compliance with any applicable federal emissions limits and standards, with no additional requirements, constitutes BACT for these engines.

IV. Emission Inventory

Cold Aggregate Storage Piles

Maximum Process Rate = 525 ton/hr (Maximum plant process rate)	525	ton/hr
Maximum Hours of Operation = 8,760 hrs/yr	8760	hrs/yr
Number of Piles = 1 pile	1	pile

PM Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00388 \text{ lb/ton}$ 0.0039 **lb/ton**

Where: k = particle size multiplier = 0.74 (Value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06) 0.74

U = mean wind speed = 9.3 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 9.3 **mph**

M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 2.5 **%**

Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ pile}) * (\text{ton}/2000 \text{ lb}) * (0.00388216962566822 \text{ lb/ton}) = 8.93 \text{ ton/yr}$ 8.93 **ton/yr**

PM10 Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00184 \text{ lb/ton}$ 0.00184 **lb/ton**

Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06) 0.35

U = mean wind speed = 9.3 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 9.3 **mph**

M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 2.5 **%**

Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ pile}) * (\text{ton}/2000 \text{ lb}) * (0.00183616130943767 \text{ lb/ton}) = 4.22 \text{ ton/yr}$ 4.22 **ton/yr**

PM2.5 Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00028 \text{ lb/ton}$ 0.000278 **lb/ton**

Where: k = particle size multiplier = 0.053 (Value for PM < 2.5 microns per AP 42, Sec. 13.2.4.3, 11/06) 0.053

U = mean wind speed = 9.3 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 9.3 **mph**

M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) 2.5 **%**

Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ pile}) * (\text{ton}/2000 \text{ lb}) * (0.000278047284000562 \text{ lb/ton}) = 0.64 \text{ ton/yr}$ 0.64 **ton/yr**

Conveyor Transfer Point (SCC 3-05-020-06)

Maximum Process Rate = 525 ton/hr (Maximum plant process rate)	525	ton/hr
Maximum Hours of Operation = 8,760 hrs/yr	8760	hrs/yr
Number of Transfers = 4 transfers (Company Information)	4	transfers

Total PM Emissions:

Emission Factor = 0.00014 lb/ton (0.00014 controlled, AP 42, Table 11.19.2-2, 8/04) 0.00014 **lb/ton**

Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (4 \text{ transfers}) * (\text{ton}/2000 \text{ lb}) * (0.00014 \text{ lb/ton}) = 1.29 \text{ ton/yr}$ 1.29 **ton/yr**

Total PM10 Emissions:

Emission Factor = 0.000046 lb/ton (0.000046 controlled, AP 42, Table 11.19.2-2, 8/04) 0.000046 **lb/ton**

Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (4 \text{ transfers}) * (\text{ton}/2000 \text{ lb}) * (0.00014 \text{ lb/ton}) = 0.42 \text{ ton/yr}$	0.42	ton/yr
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Total PM2.5 Emissions

Emission Factor = 0.000013 lb/ton (0.000013 controlled, AP 42, Table 11.19.2-2, 8/04)	0.000013	lb/ton
Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (4 \text{ transfers}) * (\text{ton}/2000 \text{ lb}) * (0.00014 \text{ lb/ton}) = 0.12 \text{ ton/yr}$	0.12	ton/yr

Screening (SCC 3-05-020-02, 03)

Maximum Process Rate = 525 ton/hr (Maximum plant process rate)	525	ton/hr
Maximum Hours of Operation = 8,760 hrs/yr 4599000 tons/year	8760	hrs/yr
Number of Screens = 1 screen (Company Information)	1	screen

Total PM Emissions:

Emission Factor = 0.0022 lb/ton (0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0022	lb/ton
Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ screen}) * (\text{ton}/2000 \text{ lb}) * (0.0022 \text{ lb/ton}) = 5.06 \text{ ton/yr}$	5.06	ton/yr

Total PM10 Emissions:

Emission Factor = 0.00074 lb/ton (0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00074	lb/ton
Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ screen}) * (\text{ton}/2000 \text{ lb}) * (0.0022 \text{ lb/ton}) = 1.70 \text{ ton/yr}$	1.70	ton/yr

Total PM2.5 Emissions

Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00005	lb/ton
Calculation: $(525 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ screen}) * (\text{ton}/2000 \text{ lb}) * (0.0022 \text{ lb/ton}) = 0.11 \text{ ton/yr}$	0.11	ton/yr

Crushing Circuit (SCC 3-05-020-05)

Maximum Process Rate = 525 ton/hr (Application information)	525	ton/hr
Maximum Hours of Operation = 8,760 hrs/yr	8760	hrs/yr

PM Emissions:

Based on AP-42

Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0012	lb/ton
Calculation: $(525 \text{ ton/hr}) * (8760 \text{ ton/hr}) * (0.0012 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 2.76 \text{ ton/yr}$	2.76	ton/yr

PM10 Emissions:

Based on AP-42

Emission Factor = 0.00054 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.00054	lb/ton
Calculation: $(0) * () * (0.00054 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 1.24 \text{ ton/yr}$	1.24	ton/yr

PM2.5 Emissions

Emission Factor = 0.0001 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0001	lb/ton
Calculation: $(525 \text{ ton/hr}) * (8760 \text{ ton/hr}) * (0.0001 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.23 \text{ ton/yr}$	0.23	ton/yr

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)	5	VMT/day
VMT per hour = $(5 \text{ VMT/day}) * (\text{day}/24 \text{ hrs}) = 0.21 \text{ VMT/hr}$	0.21	VMT/hr
Hours of Operation = 8,760 hrs/yr	8760	hrs/yr

PM Emissions:

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 12.46 \text{ lb/VMT}$	12.46	lb/VMT
Where: k = constant = 4.9 lbs/VMT (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	4.9	lbs/VMT
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant = 0.7 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.7	
b = constant = 0.45 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (12.46 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 11.37 \text{ tons/yr}$ (Uncontrolled Emissions)	11.37	tons/yr

PM10 Emissions:

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 3.43 \text{ lb/VMT}$	3.43	lb/VMT
Where: k = constant = 1.5 lbs/VMT (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	1.5	lbs/VMT
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant = 0.9 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.9	
b = constant = 0.45 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (3.43 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 3.13 \text{ tons/yr}$ (Uncontrolled Emissions)	3.13	tons/yr

PM2.5 Emissions

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 0.34 \text{ lb/VMT}$	0.34	lb/VMT
Where: k = constant = 0.15 lbs/VMT (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.15	lbs/VMT
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant = 0.9 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.9	
b = constant = 0.45 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (0.34 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 0.31 \text{ tons/yr}$ (Uncontrolled Emissions)	0.31	tons/yr

Diesel Generator

Note: Emissions are based on the power output of the engine (1214 hp).

Operational Capacity of Engine = 1,214 hp	1214	hp
Hours of Operation = 6,200.00 hours ^{a, b} .	6,200 ^{a, b} .	hours

PM Emissions:

PM Emissions = 1.24 ton/yr (Assume all PM < 1.0 um)	1.24	ton/yr
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PM-10 Emissions:

Emission Factor = 0.00033 lbs/hp-hr (EPA Tier 2 emission standards)	0.00033	lbs/hp-hr
Calculation: $(1,214 \text{ hp}) * (6,200 \text{ hours}) * (0.00033 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = 1.24 \text{ ton/yr}$	1.24	ton/yr

PM2.5 Emissions

Emission Factor = 0.00033 lbs/hp-hr (Assume all PM < 1.0 um)	0.00033	lbs/hp-hr
Calculation: $(1,214 \text{ hp}) * (6,200 \text{ hours}) * (0.00033 \text{ lbs/hp-hr}) * (\text{ton}/2000 \text{ lb}) = 1.24 \text{ ton/yr}$ (Assume all PM < 1.0 um)	1.24	ton/yr

NOx Emissions:

Emission Factor = 0.01058 lbs/hp-hr (EPA Tier 2 emission standards) 0.01058 **lbs/hp-hr**
 Calculation: (1,214 hp) * (6,200 hours) * (0.01058 lbs/hp-hr) * (ton/2000 lb) = 39.83 ton/yr 39.83 **ton/yr**

CO Emissions:

Emission Factor = 0.00573 lbs/hp-hr (EPA Tier 2 emission standards) 0.00573 **lbs/hp-hr**
 Calculation: (1,214 hp) * (6,200 hours) * (0.00573 lbs/hp-hr) * (ton/2000 lb) = 21.57 ton/yr 21.57 **ton/yr**

VOC Emissions:

Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96) 0.002514 **lbs/hp-hr**
 Calculation: (1,214 hp) * (6,200 hours) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 10.07 ton/yr 10.07 **ton/yr**

SOx Emissions:

Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96) 0.00205 **lbs/hp-hr**
 Calculation: (1,214 hp) * (6,200 hours) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 8.21 ton/yr 8.21 **ton/yr**

- a. Inventory reflects enforceable limits on hours of operation to keep emissions below the to keep emissions at or below the attainment area modeling threshold of 40 tpy for NOx.
- b. Inventory reflects enforceable limits on hours of operation to keep emissions below the Title V threshold and 80 tpy.
 **CO = carbon monoxide PM10 = particulate matter with an aerodynamic diameter of 10 microns or less
 fil) = filterable PM2.5 = particulate matter with an aerodynamic diameter of 2.5 microns or less
 HAPs = hazardous air pollutants SO2 = sulfur dioxide
 hp = horsepower TPY = tons per year
 lb = pound VOC = volatile organic compounds
 NOX = oxides of nitrogen yr = year
 PM = particulate matter

V. Existing Air Quality

BMI's Treasure Mine is located in the NW ¼ of Section 14, Township 7 South, Range 6 West in Madison County, MT. The air quality of this area is classified as better than National Standards or unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for criteria pollutants.

VI. Ambient Air Impact Analysis

The Department determined, based on the amount of allowable emissions, that the impacts from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?

YES	NO	
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

Analysis Prepared By: R. Payne
Date: 9/11/2019

DEPARTMENT OF ENVIRONMENTAL QUALITY
Air, Energy & Mining Division
Air Quality Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Barretts Minerals, Inc
Treasure Mine
8625 MT Hwy 91 South
Dillon, MT 59725

Montana Air Quality Permit number (MAQP): 2793-03

EA Draft: 9/25/2019

EA Final:

Permit Final:

1. *Legal Description of Site:* NW ¼ of Section 14, Township 7 South, Range 6 West in Madison County, MT.
2. *Description of Project:* On August 16, 2019, the Montana Department of Environmental Quality – Air Quality Bureau (Department) received a request from BMI to modify their MAQP to install a portable crusher and generator set and associated conveyors and screens. The crusher would be utilized to crush stockpiled material located at the Treasure Mine.
3. *Objectives of Project:* To pre-process mined ore from onsite prior to transport to the Dillon talc processing facility.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny the issuance of the MAQP to the facility. BMI would be denied the opportunity to pre-process their ore onsite. Any potential air emission increases that would be authorized by issuing the MAQP would not occur. However, the Department does not consider the “no-action” alternative to be appropriate because BMI has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration. Other alternatives considered were discussed in the BACT analysis, Section III, in the permit.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #2793-03.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. *SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS*: The following comments have been prepared by the Department.

A. *Terrestrial and Aquatic Life and Habitats*

The permitting action would be expected to have minor effects on terrestrial and aquatic life and habitats, as the proposed equipment would operate within an existing mine. Furthermore, the air emissions would likely have only minor effects on terrestrial and aquatic life because facility emissions would be well dispersed in the area of the operation (as described in Section 7.F of this EA). Therefore, only minor effect to terrestrial and aquatic life and habitat would be expected from the proposed project.

B. *Water Quality, Quantity and Distribution*

Water would be required for dust suppression on the mineral processing equipment and surrounding area. This water use would be expected to only cause minor, if any, impacts to water resources because the additional equipment would operate in an existing mine site with requirements for dust control using water, so only a small volume of additional water would be required to be used. In addition, the facility would emit air pollutants, and corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA. However, the Department determined that, due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #2793-03, any impacts from deposition of pollution on water quality, quantity, and distribution expected would be minor.

C. *Geology and Soil Quality, Stability and Moisture*

The activities associated with the current permit action would be conducted within the boundaries of the existing Treasure Mine. MAQP #2793-03 would contain limitations and conditions to minimize emissions to areas beyond the permit boundary effectively reducing the potential impact. Therefore, the Department has determined that the impacts to the geology and soil quality, stability, and moisture related to the current permit action would likely be minor.

D. *Vegetation Cover, Quantity, and Quality*

The emissions increase from this project would be expected to have a limited impact on the surrounding vegetation with respect to cover, quantity and quality. Any impacts from emissions or deposition of pollutants would be minor due to dispersion characteristics of the pollutants, prevailing atmospheric conditions (wind speed, wind direction, ambient temperature, etc.), and the conditions that would be placed in MAQP #2793-03.

E. *Aesthetics*

There would not be any changes to the aesthetics of the site because of this project. The site is currently an operating mine and would have the same appearance after the crushing and screening equipment would begin to operate. Visual impacts would be consistent with those found under normal operations. There would not be excessive noise or any change in light. Therefore, the Department has determined that there would not be any impacts to aesthetics related to the proposed project.

F. *Air Quality*

The air quality of the area would realize minor impacts from the proposed project because the facility would emit the following air pollutants: PM, PM10, PM2.5, NOx, and CO. These emissions would be minimized by limitations and conditions that would be included in MAQP #2653-06. While additional deposition of pollutants would occur because of the increased production, the Department determined that the impacts from deposition of pollutants would be minor due to dispersion characteristics of pollutants, the prevailing atmospheric conditions, and conditions that would be placed in MAQP #2793-03.

G. *Unique Endangered, Fragile, or Limited Environmental Resources*

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department completed a species of concern report through the environmental summary function shared by the Montana Natural Heritage Program, Natural Resource Information System (NRIS). The area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. Search results identified a number of species within the search radius. Species of concern include the Hoary Bat, Brewer's Sparrow, Westslope Cutthroat Trout and Low Beardtounge. Because potential emission levels are minor, the Department has determined that there will be a minor disturbance to unidentified unique, endangered, fragile, or limited environmental resources in the area.

H. *Demands on Environmental Resource of Water, Air and Energy*

The proposed project would have minor impacts on the demands for the environmental resources of air, water and energy. Additional demand for water and energy would be required for the crushing and screening activities and for fugitive dust suppression. However, these demands are expected to be representative of current levels. Pollutant emissions generated from the proposed permit action would have limited demands on air because of the conditions placed in MAQP #2793-03. Overall, the Department determined that the demands on the environmental resource of water, air, and energy related to the current permit action would be minor.

I. *Historical and Archaeological Sites*

The current permit action would occur within the previously disturbed industrial site at the mine. According correspondence from the Montana State Historic Preservation Office, there is low likelihood of adverse disturbance to any known archaeological or historic site because of previous industrial disturbance within the area. Therefore, the Department determined that the likelihood that the proposed project would have an impact on historical or archaeological sites would be expected to be minor.

J. *Cumulative and Secondary Impacts*

The cumulative and secondary impacts from the proposed project on physical and biological receptors in the immediate area due to an increase in emissions from the proposed project would be expected to be minor. Air pollution from the facility would be controlled by the limitations and conditions in MAQP #2793-03. The Department

believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined within the air quality permit.

8. *SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:*
The following comments have been prepared by the Department.

A. *Social Structures and Mores*

The proposed project would not create additional disruption to any native or traditional lifestyles or communities (social structures or mores) in the area as the area surrounding the project area is currently undeveloped agricultural or livestock grazing land.

Furthermore, the project would occur within the boundary of the existing mine and the permitted project would continue to be representative of current use. The Department is not aware of any current utilization by native or traditional communities. Therefore, no known impact to social structures and mores would be expected.

B. *Cultural Uniqueness and Diversity*

The Department determined that the current permit action would not have any additional impact on the cultural uniqueness and diversity of this area of operation because the proposed project would occur within the previously disturbed industrial area. The surrounding area would remain unchanged because of the proposed project.

C. *Local and State Tax Base and Tax Revenue*

The current permit action would have no impact on the local and state tax base. In turn, no additional employees are planned because of this project. Therefore, there would be no cumulative impact to the local and state tax base and revenue.

D. *Agricultural or Industrial Production*

The operation of the crushing and screening equipment would only have a minor impact on local agricultural or industrial production since the facility would be a minor source. Because minimal deposition of air pollutants would occur on the surrounding land (as described in Section 7.F of this EA), only minor and temporary effects on the surrounding vegetation (i.e. agricultural production) would occur. In addition, the facility operations would be small and temporary in nature and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation, as described in Section 7.D of this EA.

E. *Human Health*

MAQP #2793-03 would incorporate conditions to ensure that the facility would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F of this EA, the air emissions from the crushing and screening equipment would be minimized by the use of water spray and other operational limits that would be required by MAQP #2793-03. Also, the facility would be operating on a temporary basis and pollutants would disperse from the ventilation of emissions at this site (see Section 7.F of this EA). Therefore, only minor impacts would be expected on human health from the proposed project.

F. *Access to and Quality of Recreational and Wilderness Activities*

Based on information received from BMI, there is no hunting access, recreational activities or wilderness areas near the initial proposed project site. Therefore, no impacts to the access to and quality of recreational and wilderness activities would be expected.

G. *Quantity and Distribution of Employment*

The crushing and screening equipment would only require a few employees to operate. The crushing and screening equipment would be part of an existing mine site and would not be expected to have long-term affects upon the quantity and distribution of employment in any given area of operation. The application stated no new employees would be employed because of the proposed project. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. *Distribution of Population*

The crushing and screening operation is a portable industrial facility that would only require a limited number of employees. No individuals would be expected to permanently relocate to this area because of this project. Therefore, the mineral processing facility would not likely impact the normal population distribution in the initial area of operation or any further operating site.

I. *Demands for Government Services*

Government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, demands for government services would be expected to be minor.

J. *Industrial and Commercial Activity*

The operation of the new equipment would represent only a minor increase in the industrial activity in the proposed area of operation because the source would be a relatively small industrial source. Furthermore, the industrial activity associated with this plant will occur within an existing mine. Therefore, only limited additional industrial or commercial activity would be expected because of the proposed operation.

K. *Locally Adopted Environmental Plans and Goals*

The Department is not aware of any locally adopted environmental plans and goals this project may impact. The State standards would be protective of the proposed project area.

L. *Cumulative and Secondary Impacts*

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social environment in the immediate area due to the relatively small size of the operation. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in MAQP #2793-03.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of crushing and screening equipment. MAQP #2793-03 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program – Montana Sage Grouse Conservation Program

Individuals or groups contributing to this EA: Department of Environmental Quality: Air Quality Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

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